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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,858	11/18/2003	Bor-Jen Wu	030112	3722

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EXAMINER

EVERHART, CARIDAD

ART UNIT	PAPER NUMBER
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2891

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/714,858	Applicant(s) WU, BOR-JEN	
	Examiner Caridad M. Everhart	Art Unit 2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1,2,4-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 3 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-18-03 11-18-03 | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2,5-19,21-24, 29-30, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Okazaki, et al. (US 6,825,502 B2).

Okazaki et al discloses a method for forming electrode structures for light emitting devices, which are opto-electronic devices(col. 1, lines 17-20). The substrate may be opaque(col. 3, lines 45-52). There is an active layer formed on the substrate(col. 2, lines 29-35). An ohmic contact is formed between the active layer and a conductive layer(col. 11, lines 19-25). An ohmic contact can be formed at low temperature of temperatures such as 200 or 250 degrees C(col. 8, lines 42-48). The ohmic contact can be of Ni, of Ti and of Al(col. 8, lines 40-47). The metal layers are formed by solid state growth, as evaporation is a solid state growth process(col. 8, lines 23-27). The electro optical element is made from a plurality of layers(Fig. 29). There are both n and p type semiconductor portions (col. 1, lines 47-50 and col. 2, lines 52-55). There are a plurality of electrodes formed(Fig. 17, features 29, 30, and 31, and 34,

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35, and 36). There are a plurality of semiconductor layers with the active layer among the layers and sandwiched between the layers(col. 3, lines 54-60 and col. 8, lines 1-9 and Fig. 29). Etching is used to remove portions of the layers in order to deposit the ohmic layers on portions of underlying semiconductor (col 8, lines 18-25). The substrate may be transparent sapphire substrate(col. 7, lines 3-6). The device may be removed from the opaque substrate and bonded to a transparent substrate(col. 3, lines 46-53). An adhesive layer can be used to bond the active layer to the substrate(col. 14, lines 60-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 3,20, 25, 26, 27, 28, and 31, rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki et al in view of Nakagawa, et al (US 6,756,289 B1).

Okazaki et al is silent with respect to the recited materials for the substrate and with respect to the temperature less than 200 degrees and with respect to the recited devices.

Nakagawa et al discloses that display devices may be formed on polymeric substrates such as polyimide(col. 2, lines 20-27 and col. 14, lines 3-10).

With respect to the temperature, Okazaki et al teaches about 200 degrees C(col. 8, lines 45-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used polyimide as taught by Nakagawa et al in the process taught by Okazaki et al because Okazaki et al teaches that various substrate materials may be used, and because it is within the ordinary skill in the art to use materials depending upon the desired properties such as coefficient of thermal expansion. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a material such as epoxy in the bonding which is taught by Okazaki et al as cited in the above rejection because epoxy is conventional in the art as a bonding material.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used temperatures below 200 degrees C because Okazaki et al teaches about 200 degrees C, which would encompass temperatures slightly below 200 degrees C.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the device formed by the method taught by Okazaki et al in solar cells and in light sensors because optoelectronic devices such as taught by Okazaki et al are well known in the art to have use as sensors and in solar cells.

Allowable Subject Matter

Claims 4 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest the temperature range recited in the allowable claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
9-13-2005